

## REMARKS

Applicants thank the Examiner for the courtesy of an interview on June 11, 2001.

The above amendments and the following remarks are fully and completely responsive to the Office Action dated January 19, 2001. Claims 1-125 are pending in this application, with claims 19-125 added by the present amendment. In the outstanding Office Action, claims 1-2, 6-7, 11-12, and 17-18 were rejected under 35 U.S.C. § 102(b); claims 3-5, 8-10, and 13-16 were rejected under 35 U.S.C. § 103(a); claims 17 and 18 were rejected under 35 U.S.C. § 251; and claims 17 and 18 were rejected under 35 U.S.C. § 101. No new matter has been added. Claims 1-125 are presented for consideration.

### **35 U.S.C. § 102**

Claims 1-2, 6-7, 11-12 and 17-18 were rejected under 35 U.S.C. § 102 as being anticipated by Matyas (U.S. Patent No. 4,757,534). It is well established that to anticipate a claim, a reference must disclose (expressly or inherently) each and every element of the claim, including the arrangement recited in the claim. As discussed below, Matyas does not meet this requirement. Therefore, Applicants request reconsideration of this rejection.

Claim 1 recites a storage medium accessed by a vendor computer and user computer, the storage medium for storing information readable by the user computer. The storage medium includes encrypted electronic data and a medium personal number which is unique for each storage medium. At least the medium personal number is written onto the storage medium in an un-rewritable form which the user computer

cannot rewrite. The storage medium also includes permission information which includes a decryption key encrypted in a manner that is not dependent on a specific device identifier for a specific device.

Matyas is similar to the type of prior art discussed in the specification. It binds content to a particular apparatus. The medium in Matyas is not portable - it cannot be used in multiple devices as can a medium in accordance with the present invention. This restriction results from the conventional system shown in Figure 1 of the reissue application. This conventional system includes a Personal Key Generating Unit 81 that generates a personal key based on the "User's Personal Number" 91. (See, e.g., reissue application, col. 3, lines 28-29, 38-41, 45-47). The User's Personal Number can be an apparatus number of a computer. (See, e.g., reissue application, col. 3, lines 40-41, 55-57). Because the conventional software protection system uses the user's apparatus number, a "user cannot utilize a different computer even if he is authorized." (See, e.g., reissue application, col. 3, lines 60-62).

Matyas uses a variation of this conventional approach. Matyas binds encrypted data to a specific device using a specific device identifier, for example, a computer number. Matyas binds the encrypted data to a specific device by protecting a decryption key (KF) for the data. To protect the decryption key (KF), Matyas encrypts a unique computer number with key (KT). The encrypted computer number (KTTR) is then used to encrypt a unique medium identifier (Disk number), and a program number to produce key (KTPG123456). This key (KTPG123456) is then used to encrypt key (KF) to produce a "password". Thus, the "password" is based on a unique computer or

device identifier (computer number), a unique medium identifier (Disk number), a program number, and a program specific key (KF).

Matyas stores the protected decryption key on a medium as the "password" shown in Fig. 3. This approach provides a secure medium that is bound to a specific computer. But, it has the disadvantage that the medium is not portable. Thus, the Matyas design provides a secure medium at the expense of medium portability. This is because only the computer that has the matching computer number can access the decryption key (i.e., decrypt the password), and thus decrypt the encrypted data.

As seen in Fig. 3, the Matyas' software protection scheme begins by generating an encryption key, KTTR, unique to the computer. (col. 6, lines 45-46). The encryption block 26 generates KTTR by encrypting the computer number with a key, KT. (col. 6, lines 44-47). Matyas then uses the key, KTTR, to encrypt the program number and disk serial number in encryption block 30. The result is a cryptographic key that is unique to the program and the computer. (col. 6, lines 48-53). Matyas uses this unique key to encrypt the file key, KF, and produce the password. (col. 6, lines 59-65). Consequently, "only the designated computer is capable of generating the decryption key that will produce the file key, KF." (col. 8, lines 14-16).

The claimed invention avoids the problems of the prior art, including Mayas, by not binding encrypted information to a specific device. As a result, the present invention provides encrypted information on a medium that can be used on a variety of devices. But, encrypted information on a copied medium cannot be easily used on any device. This is because without the original medium identifier, the information cannot be easily decrypted.

The medium-portability provided by the claimed invention results from not basing a protection of information on a specific device identifier that identifies a specific device (e.g., computer number). Instead, the claimed invention bases protection on a medium identifier, and a specific device identifier is not needed to access the protected information on the medium.

Matyas neither teaches the claimed invention nor achieves the medium-portability provided by the claimed invention. Specifically, Matyas neither discloses nor suggests that the storage medium include permission information which includes a decryption key encrypted in a manner that is not dependent on a specific device identifier for a specific device. Because Matyas does not disclose (expressly or inherently) each and every element of the claimed invention; Matyas does not anticipate the pending claims. Consequently, Applicants request reconsideration and withdrawal of the rejection of claims 1-2, 6-7, 11-12 and 17-18 under 35 U.S.C. § 102.

### **35 U.S.C. § 103**

Claims 3-5, 8-10 and 13-16 were rejected under 35 U.S.C. § 103(a) over the combination of Matyas and Shear (U.S. Patent No. 4,827,508). Applicants request reconsideration of this rejection.

The outstanding Office Action cites the cd-rom and optical disk teachings of the Shear patent, stating:

[i]t would have been obvious to one of ordinary skill in the art at the time the invention was made to use an optical disk or a cd-rom as taught in Shear '508 for the diskette of Matyas '534 in order to store large amounts of information for distribution to various users.

Office Action dated January 19, 2001, para. 4.

The cd-rom and optical disk teachings of the Shear patent do not overcome the fundamental lack of disclosure and/or suggestion by Matyas of the claimed invention. Specifically, Shear neither discloses nor suggests that the storage medium include permission information which includes a decryption key encrypted in a manner that is not dependent on a specific device identifier for a specific device. The combination, therefore, does not suggest the claimed invention.

Even if Shear corrected the deficiencies of Matyas (denied by Applicant), the combination of Matyas and Shear results from impermissible hindsight dissection of Shear for convenient bits and pieces. Absent impermissible hindsight, the record does not show any reason why one skilled in the art would pick and choose only some of Shear's teachings to the exclusion of the whole patent. Specifically, Shear and Matyas are not in the same patent class/subclass. Additionally, the field of search for Shear does not even overlap with the field of search of Matyas. Finally, Applicants have reviewed both references and could find no suggestion or motivation within these references to motivate a person of skill in the art at the time the invention was made to combine these references. Therefore, it appears that this combination is based on impermissible hindsight. If the Examiner should persist in this rejection, it is respectfully requested that he point out the suggestion for combining these references.

Therefore, Applicants submit that in view of the fundamental lack of suggestion or disclosure of the claimed invention by Matyas, as discussed above, and the failure of Shear to correct the deficiencies in Matyas, that the combination of Matyas and the Shear patent does not disclose or suggest the claimed invention. In addition, applicants

submit that a person of skill in the art would not be motivated to combine Matyas and the Shear. Thus, the combination of these references is an improper hindsight combination of references. Consequently, Applicants request reconsideration and withdrawal the rejection of claims 3-5, 8-10 and 13-16 under 35 U.S.C. § 103(a).

### **35 U.S.C. § 251**

Claims 17 and 18 were rejected under 35 U.S.C. § 251 as being an improper recapture of broadened claim subject matter. Applicants respectfully request reconsideration and withdrawal of this rejection.

A reissue will not be granted to allow "recapture" of subject matter that was surrendered in the application to obtain the original patent. MPEP 1412.02. A reissue may, however, issue with broader claims if the reissue application is filed within two years from the date of issue of the original patent. 35 U.S.C. § 251. The Court of Appeals for the Federal Circuit and MPEP 1412.02 use a two part test for recapture of surrendered subject matter. First, the claims are reviewed to determine if the claim scope is broader than the claims that issued in the original patent. Second, the broader aspects are reviewed to determine if the broader aspects relate to surrendered subject matter. Subject matter is surrendered when claim amendments are made in an effort to overcome a prior art rejection. *In re Clement*, 45 USPQ2d 1161 (CAFC 1997).

A careful reading of the Office Action dated June 13, 1996 and the response dated November 13, 1996, both during the original prosecution, illustrate that claims 13, 18, and 23 (claims 1, 6, and 11 of the issued patent) were amended because the Office Action asserted that these claims were "directed to **non-statutory subject matter**... i.e.

they recite a data structure on a recording medium without any structural or functional relationship to a computer." Original prosecution, Office Action dated June 13, 1996, p. 2 (emphasis added). Additionally in the response dated November 13, 1996, Applicants state that "the claims have been amended in order to be directed to statutory subject matter and recite structural and functional relationship to both a user computer and a vendor computer." Response dated November 13, 1996, p. 3, lines 1-3. A careful reading of the portions of the response directed to overcoming the prior art rejections under 35 U.S.C. § 102 (Response dated November 13, 1996, p. 4, line 21- p. 7) indicates that the terms "a user computer and a vendor computer" were not used in any of the arguments used to distinguish claims 13-22 from the prior art. Consequently, the amendments made to overcome the rejection of claims 13-22 under 35 U.S.C. § 101 (non-statutory subject matter) are not considered "surrendered subject matter" by either the Court of Appeals for the Federal Circuit or the MPEP 1412.02 since these amendments were not made to overcome a prior art rejection.

Applicants are not "seeking to recapture subject matter surrendered to overcome the non-statutory [subject matter] rejection in the original prosecution." During the original prosecution, the claims were amended because the Examiner asserted that the pending claims were "directed to **non-statutory subject matter** . . . i.e. they recite a data structure on a recording medium without any structural or functional relationship to a computer." (Original prosecution, Office Action dated January 19, 2001, p. 2, emphasis added). Assuming the correctness of that rejection, during the original prosecution, applicants gave up non-statutory subject matter.

Specifically, in the Response dated November 13, 1996, Applicants amended the independent claims to define a structural or functional relationship to a computer. In claims 17 and 18, Applicant has merely amended the claims to define a broader structural or functional relationship. Consequently, the reissue claims do not seek to recapture non-statutory subject matter. Instead, in response to the Examiner's rejection under 35 U.S.C. § 101 as being directed to non-statutory subject matter, applicants have again amended the claims. The amended claims comply with the Federal Circuit's and the U.S.P.T.O. Board of Appeals' guidance on statutory subject matter claim language, and therefore recite statutory subject matter. Thus, the reissue claims do not seek to recapture the non-statutory subject matter surrendered during the original prosecution.

Claims 17 and 18 have not recaptured subject matter that was "surrendered" during the original prosecution since the amendments to the original claims that added "a user computer and a vendor computer" were not made to overcome a prior art rejection. Additionally, even if the amendment surrendered subject matter (a determination that the Applicant denies), then Applicants have not recaptured the "non-statutory" subject matter of the original claims since the present claims contain statutory subject matter as discussed below. Therefore, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 17 and 18 under 35 U.S.C. § 251.

## 35 U.S.C. § 101

Claims 17 and 18 were rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. The Office Action asserts that:

The instant claims are directed to a data structure per se. The recited storage medium comprising a medium personal number and electronic information merely recite data without the required functionality that is conveyed to a general purpose computer to perform a statutory process. The subject matter is not functional[y] descriptive, but rather a list of the information held by the storage medium which constitutes a data structure pre se.

Office Action dated January 19, 2001, para. 6.

It appears that the Office Action has misinterpreted the requirements for statutory subject matter. MPEP 2106 IV.B.1(a) states that:

"a computer readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory.

Similarly, a device readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the device software, firmware, and/or hardware components which permit the data structure's functionality to be realized, and is thus also statutory.

Applicants, however, do not merely claim a data structure as alleged by the Office Action. Instead, Applicants' claims require that the medium store data for "access and processing by a storage reading apparatus." The claims therefore define a functional interrelationship with a reading apparatus such as a computer, microprocessor, micro-controller or other hardware for reading the medium.

The information stored on a medium in accordance with the present invention is both secure and portable. The claimed medium structure can provide these benefits because of the physical structure of the information stored on the medium, such as, the recited "information which is encrypted based on said medium personal number and not on a specific device identifier for a specific device." This information is processed by a reading apparatus to provide both security and portability.

The amended claims therefore recite patentable subject matter of the type expressly permitted by the Board of Patent Appeals and the Court of Appeals for the Federal Circuit. In *In re Lowry*<sup>1</sup>, the Federal Circuit expressly discussed a rejection of claims "directed to a memory containing stored information."<sup>2</sup> The Board reversed the rejection finding that the "memory containing stored information, as a whole, recited an article of manufacture."<sup>3</sup> As with *Lowry*'s claims, Applicants' claims impose a physical organization of data that, when accessed by an apparatus provide a medium that is both secure and portable. Since, as in *Lowry*, the pending apparatus claims recite a physical structure of a medium, Applicants respectfully submit that the claims recite statutory subject matter. Applicants therefore request reconsideration and withdrawal of the rejection of claims 17 and 18 under 35 U.S.C. § 101.

## **New Claims**

Applicant has added new claims 19-125 to fully claim the invention disclosed in the specification. These claims are patentable over the cited art for at least the reasons

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<sup>1</sup> 32 U.S.P.Q.2d 1031, 1034 (Fed. Cir. 1994)

<sup>2</sup> *Id.* at 1033

<sup>3</sup> *Id.*

discussed above. Accordingly, Applicants request consideration and allowance of claims 19-125.

## **Conclusion**

Applicants' remarks have clearly overcome the rejections set forth in the Office Action dated January 19, 2001. Applicants' remarks clearly distinguish claims 1-2, 6-7, 11-12, and 17-18 from the disclosure of *Matyas* and thus overcomes the rejection of these claims under 35 U.S.C. § 102(b). Applicants' remarks in distinguishing the claimed invention from the disclosure of *Matyas* also distinguished claims 3-5, 8-10, and 13-16 from the combination of *Matyas* and *Shear*, and thus overcome the rejection of these claims under 35 U.S.C. § 103(a). Futhermore, even if the combination of *Matyas* and *Shear* produced the claimed invention (not admitted) it would not be obvious to combine these two references.

Applicants' remarks have clearly illustrated that Applicants' amendments were not an improper recapture of surrendered subject matter and thus, overcome the rejection of claims 17 and 18 under 35 U.S.C. § 251. First, the broadened subject matter was not subject to a a prior art rejection in the original prosecution. Second, Applicant has not recaptured the "non-statutory" subject matter that was surrendered if any subject mater was surrendered.

Applicants' remarks have also clearly illustrated that claims 17 and 18 are directed to statutory subject matter in that the claims define an interrelationship between a data structure on a medium and a device for reading the data and therefore, overcome the rejection of these claims under 35 U.S.C. § 101. New claims 19-125

have been added to more completely claim Applicants' invention. Consequently, claims 1-125 are in condition for allowance. Therefore, applicants respectfully request consideration allowance of claims 1-125.

Applicants submit that the application is now in condition for allowance. If the Examiner believes the application is not in condition for allowance, applicants respectfully request that the Examiner contact the undersigned attorney by telephone if it is believed that such contact will expedite the prosecution of the application.

The Commissioner is authorized to payment for any additional fees which may be required with respect to this paper to our Deposit Account No. 01-2300.

Respectfully submitted,

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